#### Chapter 2 – Psychology's Scientific Method

#### **Multiple Choice Questions**

The scientific method requires

 A. insight into thoughts and emotions.
 B. an advanced degree in statistics.
 C. evaluation of conclusions drawn.
 D. training in test administration.
 Answer: C
 Feedback: Psychology's Scientific Method
 Topic: Psychology's Scientific Method
 Bloom's Level: Comprehension
 Difficulty: Low
 APA Learning Outcome: 2.1

2. Ashton wants to study butterflies using the scientific method. Which of these represents a step or steps in the scientific method?

A. While watching the butterflies, Ashton notices a phenomenon in their feeding behavior.

- B. Ashton makes a logical educated guess to predict the butterflies' future behavior.
- C. Ashton tests his prediction by recording objective information on the butterflies.

D. All of these. Answer: D Feedback: Psychology's Scientific Method Topic: Psychology's Scientific Method Bloom's Level: Application Difficulty: Medium APA Learning Outcome: 2.1

3. Variables are elements of research which

A. can change.

B. cannot be depended upon.

C. are invalid due to fluidity.

D. remain constant.

Answer: A

Feedback: Psychology's Scientific Method Topic: Step 1. Observing Some Phenomenon Bloom's Level: Knowledge Difficulty: Low APA Learning Outcome: 2.1

- 4. A variable is defined as anything that
- A. can be assigned a numerical value.
- B. can be predicted.
- C. can change.
- D. stays constant.

Answer: C Feedback: Psychology's Scientific Method Topic: Step 1. Observing Some Phenomenon Bloom's Level: Knowledge Difficulty: Low APA Learning Outcome: 2.1

5. Joaquin has been assigned a primary research project in his psychology class. He is to observe student behavior during a learning task and attempt to form a/an \_\_\_\_\_\_. In order to do this, he must be able to articulate a broad idea that describes principles and events, and how they may be related.

A. theory
B. conclusion
C. operational definition
D. scientific method
Answer: A
Feedback: Psychology's Scientific Method
Topic: Step 1. Observing Some Phenomenon
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.1

6. A theory can be defined as

A. an attempt to test behavior and thought processes.

B. a naturalistic observation of behavior.

C. a set of closely related ideas that explains an observation.

D. the application of the scientific method.

Answer: C

Feedback: Psychology's Scientific Method

Topic: Step 1. Observing Some Phenomenon

Bloom's Level: Knowledge

Difficulty: Low

APA Learning Outcome: 2.1

7. Allie has developed a theory concerning test grades. She believes that there is a relationship between her frequency of study and the resulting grade. In order to test her theory, she has to state a(n)

A. theory.
B. principle.
C. strategy.
D. hypothesis.
Answer: D
Feedback: Psychology's Scientific Method
Topic: Step 2. Formulating Hypotheses and Predictions
Bloom's Level: Application
Difficulty: Medium

APA Learning Outcome: 2.2

8. You believe that working women are happier than women who do not work outside the home. You predict that working women are less socially isolated than women who work at home. You have just formulated two

A. representative samples.
B. operational definitions.
C. theories.
D. hypotheses.
Answer: D
Feedback: Psychology's Scientific Method
Topic: Step 2. Formulating Hypotheses and Predictions
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.1

9. In surveys of adolescents, many teenagers claim that they began smoking cigarettes because of peer pressure. In observing adolescent groups, however, you rarely see an individual offer another student a cigarette or asking another student whether they would like to smoke. You predict that peer pressure is NOT the primary reason that adolescents smoke cigarettes. You have just formulated a(n)

A. theory.
B. hypothesis.
C. bias.
D. variable.
Answer: B
Feedback: Psychology's Scientific Method
Topic: Step 2. Formulating Hypotheses and Predictions
Bloom's Level: Application
Difficulty: High
APA Learning Outcome: 2.1

10. The specific description of a behavior to be studied is referred to as the A. hypothesis.
B. theory.
C. procedure.
D. operational definition.
Answer: D
Feedback: Psychology's Scientific Method
Topic: Step 2. Formulating Hypotheses and Predictions
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

11. Which of the following best represents an operational definition?A. Dr. Williams is counting the number of times a person picks up an item from the counter.

B. Dr. Bowden is determining the efficiency of the newest jets found in the Air Force.

C. Dr. Smith is having student's recall the earliest childhood memory they can remember.

D. Dr. Benedict is having his subjects go online to look up examples of jealousy. Answer: A

Feedback: Psychology's Scientific Method Topic: Step 2. Formulating Hypotheses and Predictions Bloom's Level: Application Difficulty: High APA Learning Outcome: 2.1

12. It has been proposed that students have difficultly returning to their academic schedule after a holiday or break. Specifically, it has been predicted that there will be more student absences on the Monday following spring break than on the Friday prior to spring break. The first statement describes the \_\_\_\_\_\_, while the second is the \_\_\_\_\_\_.
A. design of the study; research method
B. theory; hypothesis
C. hypothesis; theory
D. prediction; procedure
Answer: B
Feedback: Psychology's Scientific Method
Topic: Step 1. Observing Some Phenomenon, Step 2. Formulating Hypotheses and Predictions
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.2

13. If a psychologist were to study "love," she would need to have a(n) \_\_\_\_\_\_ love. Without this specific information, the hypothesis could not be tested.

A. theory of

B. operational definition for

C. statistical approach to the study of

D. point of view concerning

Answer: B

Feedback: Psychology's Scientific Method

Topic: Step 3. Testing Through Empirical Research

Bloom's Level: Comprehension

Difficulty: Medium

APA Learning Outcome: 2.2

14. Professor Gordon is planning an experiment. She has decided that each time Johnny leaves his desk, it indicates hyperactivity. Professor Gordon has formulated a(n) A. finding.

B. theory.
C. operational definition.
D. descriptor.
Answer: C
Feedback: Psychology's Scientific Method

Topic: Step 3. Testing Through Empirical Research Bloom's Level: Application Difficulty: High APA Learning Outcome: 2.1

15. \_\_\_\_\_ is a method by which researchers combine results across studies to establish the strength of an effect. A. Meta-analysis **B.** Replication C. Substantiation D. Verification Answer: A Feedback: Psychology's Scientific Method Topic: Step 5. Evaluating the Theory Bloom's Level: Knowledge Difficulty: High **APA Learning Outcome: 2.2** 16. Which of the following is an example of research using the survey method? A. Dr. Adele watches children as they learn to read. B. Dr. Gomes studies his patients while they undergo psychological counseling. C. Dr. Trooper collects children's school grades and test scores. D. Dr. Frank asks people how many hours of TV they watch per week. Answer: D Feedback: Types of Psychological Research **Topic: Descriptive Research** Bloom's Level: Application Difficulty: Low APA Learning Outcome: 2.2

17. Which of the following is a technique that would NOT fall under the survey method?
A. telephone interviews
B. online polls
C. naturalistic observation
D. paper and pencil questionnaires
Answer: C
Feedback: Types of Psychological Research
Topic: Descriptive Research
Bloom's Level: Comprehension
Difficulty: Medium
APA Learning Outcome: 2.2

18. For which of the following would a survey be LEAST useful?A. determining students' attitudes towards their new class presidentB. determining subjects' opinions about a new amendmentC. determining subjects' level of honesty

D. determining students' feelings about homework Answer: C Feedback: Types of Psychological Research Topic: Descriptive Research Bloom's Level: Application Difficulty: Medium APA Learning Outcome: 2.2

19. Which of the following is an example of a case study?
A. asking all general psychology students to complete a mood survey for extra credit
B. conducting a series of interviews over a year with an anxiety-disordered student
C. observing the study habits of students in the library versus those of students in the cafeteria
D. assigning half the class to computerized instruction and half to the traditional classroom
Answer: B
Feedback: Types of Psychological Research
Topic: Descriptive Research
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.2

20. Surveys, case studies, and interviews are all a part of \_\_\_\_\_ research.

A. experimental
B. descriptive
C. case study
D. developmental
Answer: B
Feedback: Types of Psychological Research
Topic: Descriptive Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

21. If Professor Milton wants to examine the relationship between brain damage and intelligence levels, she will have to conduct a \_\_\_\_\_\_\_ study.
A. experimental
B. operational
C. correlational
D. observational
Answer: C
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Application
Difficulty: High
APA Learning Outcome: 2.2

22. A correlational study is used to determine A. cause and effect.

B. the relationship between variables.
C. the nature of the dependent and independent variables.
D. a representative population.
Answer: B
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

23. A correlation coefficient indicates the \_\_\_\_\_\_ between two variables.
A. cause and effect relationship
B. degree of relationship
C. standard deviation
D. validity
Answer: B
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.3

24. A study indicated a strong positive correlation between two variables. This means that A. as one variable increases, the other decreases.
B. the correlation is equal to zero.
C. one variable causes the other variable to occur.
D. as one variable increases, the other also increases.
Answer: D
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Synthesis
Difficulty: Medium
APA Learning Outcome: 2.3

25. You want to determine the relationship between caffeine intake and performance on a midquarter exam. As students sit down to take the exam, you ask them to write the number of cups of tea, soda, or coffee they ingested two hours prior to the exam. You also obtain their exam scores. You calculate the correlation coefficient between the two variables to be +0.82. What can you conclude?

A. Higher caffeine consumption is related to higher exam scores.

B. Eighty-two percent of the students consumed caffeine prior to the exam.

C. Drinking coffee caused better scores.

D. The more caffeine students consumed, the worse they scored on the exam.

Answer: A

Feedback: Types of Psychological Research

Topic: Correlational Research

Bloom's Level: Application Difficulty: Medium APA Learning Outcome: 2.3

26. What does the size of a correlation coefficient indicate?
A. size of the variables
B. strength of the relationship
C. number of data points
D. direction of the relationship
Answer: B
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.3

27. What does the positive or negative sign of a correlation coefficient indicate?
A. cause of the relationship
B. strength of the relationship
C. number of data points
D. direction of the relationship
Answer: D
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Knowledge
Difficulty: Medium
APA Learning Outcome: 2.3

28. Which of the following correlation coefficients is indicative of the strongest relationship between two variables?

A. +0.65 B. 0.00 C. -0.87 D. -0.24 Answer: C Feedback: Types of Psychological Research Topic: Correlational Research Bloom's Level: Comprehension Difficulty: High APA Learning Outcome: 2.3

29. We can predict participants' scores on Variable A with perfect accuracy by knowing their scores on Variable B. Higher scores on Variable A are associated with higher scores on Variable B. What is the correlation coefficient for the correlation between Variables A and B? A. -1.00 B. +0.50 C. 0.00 D. +1.00 Answer: D Feedback: Types of Psychological Research Topic: Correlational Research Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.3

30. We can predict participants' scores on Variable A with perfect accuracy by knowing their scores on Variable B. Higher scores on Variable A are associated with lower scores on Variable B. What is the correlation coefficient for the correlation between Variables A and B?
A. +1.00
B. 0.00
C. -1.00
D. -0.99
Answer: C
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Comprehension
Difficulty: Medium
APA Learning Outcome: 2.3

31. Professor Jacobs believes that sleep deprivation is related to conflicts between roommates. He collects data on the number of hours of sleep and the number of roommate conflicts for a group of college students over the course of a month. He obtains a correlation coefficient of +0.75. What can he conclude?

A. Seventy-five percent of the conflicts he investigated were not related to sleep deprivation.

B. Sleep deprivation is associated with fewer conflicts.

C. Sleep deprivation is associated with more conflicts.

D. Sleep and conflict were not related.

Answer: C

Feedback: Types of Psychological Research Topic: Correlational Research Bloom's Level: Application Difficulty: High APA Learning Outcome: 2.3

32. If you find no relationship between two variables, what is the correlation coefficient?

A. +1.00 B. 0.00 C. -0.87 D. -0.99 Answer: B Feedback: Types of Psychological Research Topic: Correlational Research Bloom's Level: Comprehension Difficulty: Low APA Learning Outcome: 2.3

33. Which of the following best represents the correlation between hair color and intelligence?

A. .59 B. -.68 C. 1.0 D. -.03 Answer: D Feedback: Types of Psychological Research Topic: Correlational Research Bloom's Level: Application Difficulty: High APA Learning Outcome: 2.3

34. You design a research study to investigate if there is a relationship between two variables. You measure each of them without manipulating either one. If you find that Variable A is increasing at about the same rate as Variable B is increasing, what can you conclude?

A. Variable A is causing Variable B.

B. Variable A is negatively correlated with Variable B.

C. Variable B is causing Variable A.

D. Variable A is positively correlated with Variable B. Answer: D Feedback: Types of Psychological Research Topic: Correlational Research Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.3

35. Professor Jordan has suggested to his students that a correlation exists between the number of hours spent in serious study and one's grade on the final exam. He would like his students to improve their test scores by increasing study time. The professor is describing a

A. mean score.
B. negative correlation.
C. positive correlation.
D. standard deviation.
Answer: C
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.3

36. "The problem with drinking coffee in the evening," complained Saundra, "is that it interferes with my ability to fall asleep. My mind keeps racing, but my body is so tired!" Saundra is describing the \_\_\_\_\_ between caffeine intake and sleep.

A. negative correlation
B. positive correlation
C. causal relationship
D. bias
Answer: A
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Application
Difficulty: High
APA Learning Outcome: 2.3

37. Professor Rodman found a -0.72 correlation between the severity of injuries in an automobile accident and the use of seat belts. What can he conclude?
A. Wearing seat belts saves lives.
B. People who wear seat belts are less likely to receive serious injuries in an accident.
C. People who wear seat belts will receive fewer injuries in an accident.
D. Wearing your seatbelt is not predictive of the type of injury one receives in an accident.
Answer: B
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Application
Difficulty: High
APA Learning Outcome: 2.3

38. The "third variable problem" refers to a
A. study in which an independent variable was not manipulated.
B. study where the results revealed a zero correlation.
C. situation where a variable that was not measured actually accounts for the relationship.
D. situation where the proper dependent variable was not measured.
Answer: C
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

39. The Nun Study, in which researchers followed up with a group of nuns repeatedly over the course of 20 years, is an example of what type of research?

A. longitudinal
B. sequential
C. cross-sectional
D. unethical
Answer: A
Feedback: Types of Psychological Research
Topic: Correlational Research
Bloom's Level: Comprehension

Difficulty: Medium APA Learning Outcome: 2.2

40. When conducting an experiment, Jamie assigns everybody who arrives before noon to the treatment condition and everybody who arrives after noon to the control group. What is wrong with this experiment?

A. It is not ethical.
B. Jamie has not used true random assignment to conditions.
C. Jamie is demonstrating experimenter bias.
D. It is deceptive.
Answer: B
Feedback: Types of Psychological Research

Topic: Experimental Research Bloom's Level: Application Difficulty: High APA Learning Outcome: 2.2

41. Dr. Gillespie has two groups in her experiment. She places each participant in a group by flipping a coin – heads means Group A, tails means Group B. Dr. Gillespie has satisfied the requirement of A. experimental control.

B. placebo control.

C. blind experimentation.

D. random assignment.

Answer: D

Feedback: Types of Psychological Research

Topic: Experimental Research

Bloom's Level: Comprehension

Difficulty: Low

APA Learning Outcome: 2.2

42. Random assignment of participants is important in order to ensure that

A. independent variables are not restricted.

B. groups have equal and balanced composition.

C. genders and ages are viewed independently.

D. all participants having specific characteristics are viewed in a single group.

Answer: B

Feedback: Types of Psychological Research

Topic: Experimental Research

Bloom's Level: Comprehension

Difficulty: High

APA Learning Outcome: 2.2

43. If Professor Jung wants to be able to draw cause and effect conclusions from her research, which of the following is the most crucial aspect of her experimental design? A. hypothesis formulation B. random assignment
C. data recording
D. control group size
Answer: B
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application
Difficulty: High
APA Learning Outcome: 2.2

44. Participants in a study listen to a lecture either in a lecture hall filled with natural light or in a lecture hall with no windows and artificial light. Before leaving the lectures, the participants fill out a mood survey. What is the independent variable in this study?
A. participants' responses to the survey questions
B. number of participants
C. type of light
D. the mood survey
Answer: C
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.2

45. Skinner discovered that a pigeon will peck at a button more often if the pecking is rewarded with a food pellet. In Skinner's study, the food pellet is the \_\_\_\_\_\_ variable.

A. dependent
B. third problem
C. independent
D. correlational
Answer: C
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.2

46. Professor Stenson is examining the effects of color on patients' anxiety level. She randomly assigns patients to either a room painted white or a room painted black, and then records their blood pressure. What is the independent variable?

A. blood pressure
B. anxiety level
C. room color
D. building type
Answer: C
Feedback: Types of Psychological Research
Topic: Experimental Research

Bloom's Level: Application Difficulty: High APA Learning Outcome: 2.2

47. Dr. Smith has plans to conduct an experiment on motivation. His subjects will be varsity athletes who receive the experimental treatment as a group. Dr. Smith has hired Jack to act as a research subject who has little motivation despite the encouragement provided to him during the experiment. Dr. Smith wants to see how Jack's behavior affects the motivation of the actual research subjects. Jack is serving as

A. the dependent variable.
B. a confederate.
C. an observer.
D. a third variable.
Answer: B
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application
Difficulty: Low
APA Learning Outcome: 2.2

48. Dr. Kingston is examining how student's reading speed is affected by being tutored either by a teacher's assistant or a computer-based reading program. In this experiment, what is the dependent variable?
A. reading speed
B. teacher's assistant
C. computer program
D. grade level
Answer: A
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application
Difficulty: High
APA Learning Outcome: 2.2

49. A history class has agreed to be the subjects of a research study. Half of the class has been asked to study for the next test while listening to classical music. The remaining students will study in a silent environment. The test scores of the two groups will be compared. Which of the following is the dependent variable?

A. classical music
B. silent environment
C. reading speed
D. test scores
Answer: D
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application
Difficulty: Medium

APA Learning Outcome: 2.2

50. A researcher tells a group of participants that as part of his experiment they are going to receive "painful" electrical shocks. He tells a second group that they will receive "mild" electric shock. He asks participants in both groups whether they prefer to wait alone or with others while he sets up the shock machinery. What is the dependent variable?

A. painful shocks
B. mild shocks
C. participants' answers to the question about waiting
D. the shock machinery
Answer: C
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application
Difficulty: High
APA Learning Outcome: 2.2

51. Skinner discovered that a pigeon will peck at a button more often if the pecking is rewarded with a food pellet. In Skinner's study, the amount of pecking is the \_\_\_\_\_\_ variable.
A. dependent
B. experimental
C. the independent
D. third problem
Answer: A
Feedback: Types of Psychological Research
Topic: Experimental Research

Bloom's Level: Application Difficulty: Medium

APA Learning Outcome: 2.2

52. A researcher predicted that talking to plants enhances their growth. She gave 24 plants the same amount of food, water, and sunlight. She talked to 12 of the plants daily for 6 weeks. In this experiment, what was the dependent variable? A. food, water, and sunlight

B. the plants C. talking to the plants D. plant growth Answer: D Feedback: Types of Psychological Research Topic: Experimental Research Bloom's Level: Application Difficulty: High APA Learning Outcome: 2.2

53. A properly designed hypothesis will test a theory by predicting the A. random assignment of the experimental and control groups.

B. changes in the dependent variable that are caused by changes in the independent variable.

C. reduction of randomness caused by the experimental treatment.

D. participant error and its effect upon the results of the experiment.

Answer: B

Feedback: Types of Psychological Research

Topic: Experimental Research

Bloom's Level: Comprehension

Difficulty: Medium

APA Learning Outcome: 2.1

54. Participants in a study are divided into two groups, with one group receiving an experimental medication and the second group receiving a pill that looks like the experimental medication but does not actually contain medication. The group receiving the experimental medication is called the \_\_\_\_\_ group.

A. independent B. control C. placebo D. experimental Answer: D Feedback: Types of Psychological Research Topic: Experimental Research Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.2

55. In a formal experiment, which group is the experimental group?

A. group that is subjected to manipulation of the independent variable

B. randomly assigned group

C. group that is not subjected to manipulation of the independent variable

D. group that is representative of the general population

Answer: A

Feedback: Types of Psychological Research Topic: Experimental Research Bloom's Level: Knowledge Difficulty: Low APA Learning Outcome: 2.2

56. In an experiment, the control group is the

A. group that is subjected to manipulation of the independent variable.

B. randomly assigned group.

C. group that is not subjected to manipulation of the independent variable.

D. group that is representative of the general population.

Answer: C

Feedback: Types of Psychological Research

Topic: Experimental Research

Bloom's Level: Knowledge

Difficulty: Low APA Learning Outcome: 2.2

57. In scientific research, the group which receives treatment is called the \_\_\_\_\_\_ group.
A. experimental
B. control
C. independent
D. dependent
Answer: A
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

58. In a formal experiment, the group that is NOT subjected to a treatment condition is referred to as the \_\_\_\_\_\_ group.A. control

B. dependent
C. experimental
D. independent
Answer: A
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

59. In experimental research, the group which receives no treatment is called the \_\_\_\_\_\_
group.
A. placebo
B. abstinence
C. control
D. experimental
Answer: C
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

60. An experimenter wants to study the relationship between caffeine and reaction time. She assigns participants as follows: Group One receives 100 mg of caffeine; Group Two receives 200 mg of caffeine; Group Three receives 300 mg of caffeine; and, Group Four receives no caffeine. Twenty minutes later all participants complete the reaction-time test. Which group is the control group?

A. Group Four
B. Group Three
C. Group Two
D. Group One
Answer: A
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Comprehension
Difficulty: Low
APA Learning Outcome: 2.2

61. Group A received progressive relaxation training prior to test taking while Group B received no treatment. Group A is the \_\_\_\_\_\_ group, while Group B is the \_\_\_\_\_\_ group.
A. treatment; placebo
B. experimental; control
C. control; treatment
D. placebo; control
Answer: B
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.2

62. External validity refers to the
A. extent to which the results of a study can improve human life.
B. reliability of naturalistic observation.
C. problem with placebo effects.
D. extent to which an experimental design reflects the real-world issues it explores.
Answer: D
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Knowledge
Difficulty: High
APA Learning Outcome: 2.3

63. One criticism leveled towards Skinner was that a majority of his work was conducted in laboratories with animals. Critics were most concerned with
A. external reliability.
B. internal reliability.
C. external validity.
D. internal validity.
Answer: C
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application

Difficulty: High APA Learning Outcome: 2.3

64. Internal validity refers to the
A. extent to which experimental design represents the real world.
B. extent to which changes in the dependent variable are due to the manipulation of the independent variable.
C. causes of relationships as determined by correlational research.
D. methodology used to carry out random assignment.
Answer: B
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.3

65. The tendency to provide subtle clues as to the true nature of an experiment is a form of

\_\_\_\_\_\_ bias. A. experimenter B. control C. participant D. third variable Answer: A. Feedback: Types of Psychological Research Topic: Experimental Research Bloom's Level: Knowledge Difficulty: Low APA Learning Outcome: 2.2

66. A male experimenter is friendlier towards female participants than he is towards male participants. This is an example of \_\_\_\_\_\_ bias.
A. subject
B. response
C. experimenter
D. participant
Answer: C
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application
Difficulty: Low
APA Learning Outcome: 2.2

67. Although the true nature of the experiment was supposed to be a secret, Professor Bobson always smiled when a subject checked the left box. As a result, subjects began to routinely check the left box. How would one describe this potential problem? A. experimenter demands B. unethical practices C. demand characteristics D. experimenter manipulation Answer: C Feedback: Types of Psychological Research **Topic: Experimental Research** Bloom's Level: Application Difficulty: High APA Learning Outcome: 2.2 68. The placebo effect refers to the A. difference between experimental and control groups. B. experimenter's expectation that the experimental group will perform better. C. finding that people feel better simply because they believe they are receiving medication. D. effect the third variable problem has on the dependent variable. Answer: C Feedback: Types of Psychological Research **Topic: Experimental Research** Bloom's Level: Knowledge Difficulty: Low

APA Learning Outcome: 2.3

69. Sonja believes the pill her doctor gave her has cured her of her anxiety disorder, even though, unbeknownst to her, the pill contained no active ingredients. Sonja's belief is an example of the

\_\_\_\_\_\_ effect. A. experimenter B. bias C. control D. placebo Answer: D Feedback: Types of Psychological Research Topic: Experimental Research Bloom's Level: Application Difficulty: Low APA Learning Outcome: 2.3

70. Although research has shown that it takes approximately thirty minutes for an aspirin to have an effect on the body, most people report that their headaches begin to fade after only about ten minutes. What is the best explanation for this finding?

A. subjects are giving false reports
B. correlational data is inaccurate
C. placebo effects
D. effect of demand characteristics
Answer: C
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Application

Difficulty: High APA Learning Outcome: 2.3

71. In a \_\_\_\_\_\_ experiment, neither the participants nor the experimenter know which group receives the treatment.

A. double-blind B. controlled C. naturalistic D. placebo Answer: A Feedback: Types of Psychological Research Topic: Experimental Research Bloom's Level: Knowledge Difficulty: Low APA Learning Outcome: 2.2

72. In a double-blind experiment,

A. only the participants know which group they are in.

B. only the researchers know which group the participants are in.

C. neither researchers nor participants know who is in the control or experimental group.

D. researchers do not have access to the results of the study.

Answer: C

Feedback: Types of Psychological Research

Topic: Experimental Research

Bloom's Level: Knowledge

Difficulty: Low APA Learning Outcome: 2.2

73. The group of participants observed in a research study are referred to as the

A. sample.
B. study group.
C. population.
D. control group.
Answer: A
Feedback: Research Samples and Settings
Topic: The Research Sample
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.1

74. Dr. Wong's research subjects include all of the students who are taking his introductory sociology course. In the context of the research, this group of students are referred to as the A. control group.

B. sample.

C. experimental group.

D. population.

Answer: B Feedback: Research Samples and Settings Topic: The Research Sample Bloom's Level: Application Difficulty: Low APA Learning Outcome: 2.1

75. "This cannot be the real opinion of the entire student body! She didn't ask me to fill out her survey!" Haley complained. Her psychology teacher explained that

A. responses to surveys are very complex and are seldom understood.

B. Haley is correct as an accurate survey would include responses from all members of the student body.

C. a representative sample of responses can indicate the view of the majority.

D. freshmen were excluded from the survey due to their lack of experience.

Answer: C

Feedback: Research Samples and Settings Topic: The Research Sample Bloom's Level: Application Difficulty: Medium APA Learning Outcome: 2.3

76. Researchers who use \_\_\_\_\_\_ attempt to view behavior without disturbing the environment.
A. naturalistic observation
B. controlled observation
C. experimental research
D. restricted design research
Answer: A
Feedback: Research Samples and Settings
Topic: The Research Setting
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

77. Kevin has just completed his first day of naturalistic observation at the local high school, and he is concerned about the effects his presence in the classrooms is having on adolescent behavior. This is an important issue since, in truly naturalistic research, researchers cannot

A. be visible.
B. intervene.
C. be vocal.
D. All of these.
Answer: B
Feedback: Research Samples and Settings
Topic: The Research Setting
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.2

78. Dr. Jimand poses as a student in his study of Bosnian students who are adjusting to college life in the United States. Dr. Jimand lives in the dorm with the students and attends classes with them. What research method is he using?
A. formal experimentation
B. survey method
C. clinical method
D. naturalistic observation
Answer: D
Feedback: Research Samples and Settings
Topic: The Research Setting
Bloom's Level: Comprehension
Difficulty: Medium
APA Learning Outcome: 2.2

79. The correlational method differs from naturalistic observation in that it
A. involves the use of more than one variable.
B. explains the causal nature of a relationship.
C. is not limited to real word settings.
D. can be carried out over an extended period.
Answer: C
Feedback: Research Samples and Settings
Topic: The Research Setting
Bloom's Level: Comprehension
Difficulty: High
APA Learning Outcome: 2.2

APA Learning Outcome: 2.3

81. The \_\_\_\_\_\_\_ is determined by adding up participants' scores and dividing by the number of participants.
A. median
B. standard deviation
C. correlation coefficient
D. mean
Answer: D

Feedback: Analyzing and Interpreting Data Topic: Descriptive Statistics Bloom's Level: Knowledge Difficulty: Low APA Learning Outcome: 2.3

82. You work for a business that has many employees whose salaries range from \$22,000 to nearly \$400,000 for the top executives. Your boss tells you that your next raise can be based on the mean, median, or mode. You currently make \$28,000 a year. Which measure should you choose?

A. mean
B. median
C. mode
D. It does not matter as the measure chosen does not make a difference.
Answer: A
Feedback: Analyzing and Interpreting Data
Topic: Descriptive Statistics
Bloom's Level: Application
Difficulty: High
APA Learning Outcome: 2.3

83. Five students had the following scores on a psychological test: 10, 10, 15, 25, and 40. The mean of these five scores is

A. 10.
B. 15.
C. 20.
D. 25.
Answer: C
Feedback: Analyzing and Interpreting Data
Topic: Descriptive Statistics
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.3

84. Five students had the following scores on a psychological test: 10, 10, 15, 25, and 40. The median of these five scores is

A. 10.
B. 15.
C. 20.
D. 25
Answer: B
Feedback: Analyzing and Interpreting Data
Topic: Descriptive Statistics
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.3

85. The mode of a distribution of scores refers to the A. most common score.
B. degree to which the scores are spread out.
C. middle score.
D. average score.
Answer: A
Feedback: Analyzing and Interpreting Data
Topic: Descriptive Statistics
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.3

86. Five students had the following scores on a psychological test: 10, 10, 15, 20, and 40. The mode of these five scores is

A. 10.
B. 15.
C. 20.
D. 25.
Answer: A
Feedback: Analyzing and Interpreting Data
Topic: Descriptive Statistics
Bloom's Level: Application
Difficulty: Medium
APA Learning Outcome: 2.3

87. When considering measures of dispersion, \_\_\_\_\_\_ is the most sophisticated because it involves taking the squared deviation from the mean.

- A. mode
- B. median
- C. range

D. standard deviation

Answer: D

Feedback: Analyzing and Interpreting Data

Topic: Descriptive Statistics

Bloom's Level: Knowledge

Difficulty: High APA Learning Outcome: 2.3

88. When using inferential statistics, the researcher learns

A. how to conduct a correlational study.

B. whether the data collected support the hypothesis.

C. the degree of bias in the data.

D. only the significant outcomes.

Answer: B

Feedback: Analyzing and Interpreting Data

Topic: Inferential Statistics Bloom's Level: Comprehension Difficulty: High APA Learning Outcome: 2.3

89. In terms of statistical significance, what is considered to be the minimum level of probability that scientists will accept for concluding that observed differences are real and not due to chance?

A. .001
B. .05
C. 95
D. 99
Answer: B
Feedback: Analyzing and Interpreting Data
Topic: Inferential Statistics
Bloom's Level: Knowledge
Difficulty: High
APA Learning Outcome: 2.3

90. Of the following, which is the most rigorous level of statistical significance?

A. .05

B. .01

C. .99

B. .95

Answer: B

Feedback: Analyzing and Interpreting Data

**Topic:** Inferential Statistics

Bloom's Level: Knowledge

Difficulty: High

APA Learning Outcome: 2.3

91. Dr. Matthews has proposed to conduct a study on first year students' alcohol consumption. The institutional review board at her university will decide
A. the type of students she can include in her study.
B. where she can publish the results of her study.
C. the hypotheses she should include when designing her study.
D. whether her study meets ethical guidelines.
Answer: D
Feedback: Conducting Ethical Research
Topic: Ethics Guidelines
Bloom's Level: Application
Difficulty: Low
APA Learning Outcome: 2.5

92. A team of psychology students would like to expose their classmates to an embarrassing experience in order to gather data for their term project. Their instructor has asked them to read

the ethical guidelines published by the American Psychological Association. She wants them to understand that

A. they cannot engage in deception.

B. they cannot conduct a study in which people will feel embarrassed.

C. participants need to be informed of the nature of the procedures before consenting.

D. most college students regard such experiments as a positive experience.

Answer: C

Feedback: Conducting Ethical Research

**Topic: Ethics Guidelines** 

Bloom's Level: Comprehension

Difficulty: Medium

APA Learning Outcome: 2.5

93. Inmates at a prison take part in an experiment and then the prison guard goes home and says to his wife, "James Patterson, one of the participants, did not perform well." Which ethical principle was violated?

A. limited deception
B. informed consent
C. freedom from coercion
D. confidentiality
Answer: D
Feedback: Conducting Ethical Research
Topic: Ethics Guidelines
Bloom's Level: Application
Difficulty: Low
APA Learning Outcome: 2.5

94. Confidentiality requires that

A. data from a study is stored without names attached.B. participants are given a full description of the study.

C. participants have a right to view the results of a study.

D. participation in a study is voluntary. Answer: A

Feedback: Conducting Ethical Research Topic: Ethics Guidelines Bloom's Level: Comprehension Difficulty: Low

APA Learning Outcome: 2.5

95. The ethical obligation to tell participants about the study once participation in the study is complete is calledA. debriefing.B. informed consent.C. deception.D. elimination bias.Answer: A

Feedback: Conducting Ethical Research Topic: Ethics Guidelines Bloom's Level: Knowledge Difficulty: Low APA Learning Outcome: 2.5

96. Deception in research is ethically allowed
A. in correlational studies only.
B. only in the case of double-blind studies that provide subsequent debriefing.
C. in medical research only.
D. if the anticipated benefits outweigh the anticipated costs, and if participants are debriefed.
Answer: D
Feedback: Conducting Ethical Research
Topic: Ethics Guidelines
Bloom's Level: Comprehension
Difficulty: Medium
APA Learning Outcome: 2.5

97. According to your text, what is one reason why reality TV shows do not meet ethical standards for psychological research?

A. Participants do not typically give informed consent.

B. Participants are often subjected to psychological and/or physical risks.

C. Participants are often deceived.

D. All of these.

Answer: D

Feedback: Conducting Ethical Research

Topic: The Place Values in Psychological Research

Bloom's Level: Application

Difficulty: Low

APA Learning Outcome: 2.5

98. What, if anything, is wrong with over-generalizing the findings of a study that has a very small sample size?

A. Nothing is wrong because sample size is irrelevant.

B. Random assignment is typically not used in studies with small samples.

C. The subjects may share a characteristic that does not occur across the chosen population.

D. Studies with small sample sizes do not have control groups.

Answer: C

Feedback: Thinking Critically About Psychological Research

Topic: Avoid Overgeneralizing Based on Little Information

Bloom's Level: Comprehension

Difficulty: Low

APA Learning Outcome: 2.3

99. According to James Pennebaker, writing about one's traumatic experiences is positively related to

A. finding employment after being laid off work. B. engaging in risky behavior such as driving at high speeds. C. leaving a current personal relationship and living alone. D. All of these. Answer: A Feedback: The Scientific Method and Health and Wellness Topic: The Scientific Method and Health and Wellness Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.3 100. James Pennebaker's research demonstrated that A. the case study method is ideal for examining issues of health and wellness. B. survey results cannot always be generalized to the population of interest. C. the findings of a correlational study can be the impetus for experimental research that determines causation. D. naturalistic observations are sometimes the most valuable tool available to a researcher who

D. naturalistic observations are sometimes the most valuable tool available to a researcher ascribes to the scientific method. Answer: C Feedback: The Scientific Method and Health and Wellness Topic: The Scientific Method and Health and Wellness Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.3

### **Short Answer Questions**

101. Using the scientific method, how would a psychologist study why people experience road rage?

Answer: To answer the question of why people experience road rage—feelings of anger that result from frustration while driving and are directed at other drivers—the researcher would begin by identifying a question that interests her. In this case, the general question has been identified, but the researcher may want to narrow her focus by identifying more specific questions. Perhaps she might want to ask questions about the cognitive causes of road rage, or the emotional causes, or the behavioral causes. Asking specific questions will help the researcher formulate focused explanations of the behavior, the second step of the scientific method. For example, the researcher might explain the causes of road rage from a cognitive perspective, suggesting that drivers come to erroneous conclusions about why other people drive poorly. Finally, the researcher would design a way to test this explanation and collect data from drivers. If the data failed to support the explanation, the researcher would then refine her hypothesis about why people experience road rage. Feedback: Psychology's Scientific Method

Topic: Steps 1 - 5 Bloom's Level: Application Difficulty: High

### APA Learning Outcome: 2.1

102. Describe what an operational definition is and explain its importance in the field of psychology.

Answer: An operational definition is an objective description of a variable being measured in a given study. The purpose is to eliminate the fuzziness in defining psychological phenomena and provides a common language to facilitate communication among researchers. Feedback: Psychology's Scientific Method

Topic: Step 3. Testing Through Empirical Research Bloom's Level: Knowledge Difficulty: Low APA Learning Outcome: 2.1

103. Discuss two limitations of using surveys in research.

Answer: The first limitation is that some people lie or are not completely honest when answering questions about themselves. The second limitation is that some participants attempt to provide answers that they believe will please the researcher.

Feedback: Types of Psychological Research Topic: Descriptive Research Bloom's Level: Comprehension

Difficulty: Low

APA Learning Outcome: 2.2

104. In a study of the relationship between playground aggression and time spent playing with toy guns, your data gives you a correlation coefficient of +0.64. Explain what this coefficient means by drawing a graph indicating the approximate appearance of the line and discussing the strength and direction of the relationship.

Answer: Because the correlation coefficient is a positive number, the slope of the line on a graph must move in the positive direction with one variable on each axis. Basically, a positive correlation means that as Variable A is increasing, so is Variable B. Note: The answer should clearly spell out that the correlation observed does not indicate that there is a cause-and-effect relationship between the variables. An answer that does not address cause-and-effect at all should not receive full credit.

Feedback: Types of Psychological Research Topic: Correlational Research Bloom's Level: Application Difficulty: High APA Learning Outcome: 2.3

105. Dr. Schwartzmiller believes that herbal medicines significantly reduce the number of depressive symptoms in women. She wants to use experimental methods to test her hypothesis. What components of a well-designed experiment should be included in this study? Answer: To test her hypothesis experimentally, Schwartzmiller will want to randomly assign her participants to receive either no medicine (control group) or some amount of the medicine (experimental groups). This means that participants are equally likely to be in either the control or experimental groups, and that all the other ways in which participants differ from each other

will be distributed across the groups. Participants in the control group will receive no medicine whereas those in the experimental groups will receive some dose of the medicine (e.g., 1 pill, 2 pills, etc.). The importance of having a control group is that Schwartzmiller will be able to say that any changes in the experimental participants' number of symptoms are due to the medicine, and not to normal fluctuations in depressive symptoms.

Feedback: Types of Psychological Research Topic: Experimental Research Bloom's Level: Comprehension Difficulty: High APA Learning Outcome: 2.4

106. Explain the difference between a dependent variable and an independent variable. Answer: The independent variable is the one believed to influence the other variable. The variable hypothesized to be influenced is called the dependent variable. In formal experimentation, the researcher manipulates the independent variable by providing the "active" condition of the variable to the experimental group and providing an inert condition of the independent variable to the control group. The researcher then observes whether the two groups differ in the dependent variable.

Feedback: Types of Psychological Research Topic: Experimental Research Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.2

107. Define the term "external validity" and then determine the research technique that provides the highest degree of external validity. Provide a rationale for your choice.
Answer: External validity is the degree to which the findings from a research design actually reflect what is going on in the "real world". Naturalistic observation provides the highest degree of external validity, because the data is collected in "real world" settings.
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Comprehension
Difficulty: Medium
APA Learning Outcome: 2.3

108. Given the following data set, calculate the mean and discuss why the mean is, or is not, the best measure of central tendency.

# 12, 16, 11, 2, 44, 15

Answer: Mean=16.7, for this particular data set. The mean would NOT be a very effective choice because of the two extreme scores.

Feedback: Analyzing and Interpreting Data Topic: Descriptive Statistics Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.3

109. Contestants of reality TV shows are often asked to engage in unpleasant behaviors (such as eating bugs on Fear Factor or being stranded in a foreign country on The Amazing Race). While viewers think they are learning about human nature, these "experiments" are not real psychological studies that employ the scientific method and ethical guidelines as put forth by the American Psychological Association. Describe why these TV shows do not meet the ethical guidelines that psychological research must follow.

Answer: They do not meet the guidelines because - no informed consent; use of deception; unreasonable levels of risk; exorbitant award money as it relates to undue persuasion; and a lack of ecological validity. In other words, we cannot really learn much from the contestants of reality TV shows.

Feedback: Conducting Ethical Research Topic: Ethics Guidelines Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.5

110. Briefly describe the research of James Pennebaker in regards to expressive writing and health, and present the guidelines an individual should follow in order to benefit from the healing power of writing.

Answer: Pennebaker's research explored the connections between traumatic life events, expressive writing, health, and work performance. He found that writing about traumatic life events had healing effects in that the individuals had improved psychological well-being in comparison to those who experienced similar events but did not write about them. The following guidelines are suggested for those who wish to benefit from the healing power of writing: find a quiet place to write; limit writing to one topic; write for a few minutes each day; do not worry about the conventions of writing; and, write about the positives in your life.

Feedback: Conducting Ethical Research Topic: Ethics Guidelines Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.3

# **True/False Questions**

111. The first step of the scientific method is to formulate hypotheses.Answer: FalseFeedback: Psychology's Scientific MethodTopic: Psychology's Scientific MethodBloom's Level: KnowledgeDifficulty: LowAPA Learning Outcome: 2.1

112. Data refers to all the information a researcher collects when carrying out a study.

Answer: True Feedback: Psychology's Scientific Method Topic: Step 3. Testing Through Empirical Research Bloom's Level: Knowledge Difficulty: Low APA Learning Outcome: 2.1

113. Meta-analysis refers to the replication of research in order to determine whether a finding is reliable.

Answer: False Feedback: Psychology's Scientific Method Topic: Step 5. Evaluating the Theory Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.1

114. When correlations are positive, this means that one variable caused another variable to occur.

Answer: False Feedback: Types of Psychological Research Topic: Correlational Research Bloom's Level: Comprehension Difficulty: Medium APA Learning Outcome: 2.3

115. The independent variable is what the experimenter arranges or has control over to allow a comparison in an experiment.
Answer: True
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

116. The experimental group receives the active condition of the independent variable. Answer: TrueFeedback: Types of Psychological ResearchTopic: Experimental ResearchBloom's Level: KnowledgeDifficulty: LowAPA Learning Outcome: 2.2

117. Experimental research must include an independent variable and a dependent variable.Answer: TrueFeedback: Types of Psychological ResearchTopic: Experimental Research

Bloom's Level: Knowledge Difficulty: Low APA Learning Outcome: 2.2

118. Blind experiments are conducted in an effort to rule out experimenter bias.
Answer: True
Feedback: Types of Psychological Research
Topic: Experimental Research
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.3

119. The research sample is the entire group about which the investigator wants to draw conclusions.
Answer: False
Feedback: Research Samples and Settings
Topic: The Research Sample
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

120. The careful observation of behavior in laboratory settings is called naturalistic observation.
Answer: False
Feedback: Research Samples and Settings
Topic: The Research Setting
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.2

121. Researchers are free to publish the identity of research participants who were studied using naturalistic observation.
Answer: False
Feedback: Research Samples and Settings
Topic: The Research Setting
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.5

122. In a set of numbers, the mode is the number that divides the distribution in half when the numbers are arranged from lowest to highest.
Answer: False
Feedback: Analyzing and Interpreting Data
Topic: Descriptive Statistics
Bloom's Level: Knowledge
Difficulty: Low
APA Learning Outcome: 2.3

123. The standard deviation is a critical statistic in correlational research.
Answer: False
Feedback: Analyzing and Interpreting Data
Topic: Descriptive Statistics
Bloom's Level: Comprehension
Difficulty: Medium
APA Learning Outcome: 2.3

124. A participant must give informed consent prior to taking part in an experiment.Answer: TrueFeedback: Conducting Ethical ResearchTopic: Ethics GuidelinesBloom's Level: KnowledgeDifficulty: LowAPA Learning Outcome: 2.5

125. Under certain conditions, deception can be used in psychological studies of humans.
Answer: True
Feedback: Conducting Ethical Research
Topic: Ethics Guidelines
Bloom's Level: Comprehension
Difficulty: Low
APA Learning Outcome: 2.5